Table A1: Summary of Parameters Used in Model Calculations

Parameter	Description	Value	Source
MW	Molecular weight of PCB	326 gm/mole	Based on homolog distribution in Lake Huron Waters, Anderson et al. (1999)
K_{oc}	Organic carbon partition coefficient	$10^{6.1}$ L/kg	Based on homolog distribution in Lake Huron Waters, Anderson et al. (1999)
He	Henry's law constant at 25°C	2.30×10^{-4} atm-m^3/mole	Bruner et al. (1990)
W_{PCBT}	PCB loading	kg/d	Time series is calculated based on hydrograph and concentration (Verbrugge etal. 1995)
$W_{DEPOSITION}$	PCB loading from wet and dry deposition	12 kg/year	Endicott and Kandt (1994)
RATE(N)	Overall air/water mass transfer coefficient	m/day	Calculated (Achman et al. 1993; Wanninkhof et al. 1993; Reid et al. 1987; Hornbuckle 1994, 1995)
VD	Diffusion exchange coefficient	0.1 cm/d	Endicott et al. (1990)
Z1LIPIDF/ Z2LIPIDF	fraction lipid weight for zooplankton	0.05 g(lp)/g wwt	Thomann (1989)
R_{ZM}	Dry to wet tissue ratio for zebra mussels	0.15	Schneider (1992)
$FLPZM_{Cohort}$	Lipid fraction of zebra mussels	0.05 g lipid/ g wwt	Endicott et al. (1998)
CHEMEFF*	Efficiency of chemical uptake by mussels	dimensionless	Endicott et al. (1998), Based on log K_{ow} (Equation 5 in text)
CHEMFOOD*	PCB assimilation efficiency for zebra mussels for biotic solids	dimensionless	Endicott et al. (1998), Based on log K_{ow} (Equation 6 in text)

Table A1: Summary of Parameters Used in Model Calculations

Parameter	Description	Value	Source
VFILT(N) and FILT(Cohort,N)	Uptake rate for zebra mussels of class1(/class2/class3)		Calculated internally in the code as per SAGZM (LTI 1995, 1997)
UPTAKEZ1/ UPTAKEZ2	Uptake rate for herbivorous (/carnivorous) zooplankton		Calculated internally in the code as per SAGZM (LTI 1995, 1997)
Z1ASSM(K1)	Herbivorous zooplankton assimilation efficiency	0.6	Bierman et al. (1986)
Z2ASSM(K2)	Carnivorous zooplankton assimilation efficiency	0.6	Bierman et al. (1986)
RAGZD(L,N)	Rate at which a phytoplankton is grazed by herbivorous zooplankton	mg/l-d	Calculated internally in the code as per SAGZM (LTI 1995, 1997)
RZ1GZD(K1,N)	Rate at which a herbivorous zooplankton is grazed by carnivorous zooplankton	mg/l-d	Calculated internally in the code as per SAGZM (LTI 1995, 1997)
RZ2GZD(K2,N)	Carnivorous zooplankton predatory death rate	1/d	Calculated internally in the code as per SAGZM (LTI 1995, 1997)
PCBZ1ASS(K1)	PCB assimilation efficiency for Herbivorous zooplankton	0.4	Endicott et al. (1990)
PCBZ2ASS(K1)	PCB assimilation efficiency for Carnivorous Zooplankton	0.4	Endicott et al. (1990)
Tsssnk (TUPSNK)	Settling velocity for PCBs associated with biotic, (/abiotic and detritus solids)	0.5 m/day	LTI (1995, 1997)
VUSSB(N) (/VUPPB)*	Base resuspension velocity for PCBs associated with abiotic (/SPD) solids	m/day	SAGZM (LTI 1995, 1997)

Table A1: Summary of Parameters Used in Model Calculations

Parameter	Description	Value	Source
VUPSSW(N) (/VUPPW(N))*	Resuspension velocity for PCBs associated with abiotic solids (/SPD)	m/day	SAGZM (LTI 1995, 1997)
Vsslong(N) (/VUPPW(N))*	Burial rate for abiotic (/SPD) solids	m/day	SAGZM (LTI 1995, 1997)
KRSEDP	Rate Coefficient for mineralization of SPD	0.175×10^{-4} 1/day	SAGZM (LTI 1995, 1997)
CAIR	Annual average air PCB Concentration	0.5 ng/m^3	Endicott and Kandt (1994)
PCBBD(6/7)	PCB concentration for Lake Huron boundary (for segment 6 and 7)	0.14 ng/L	Anderson et al. (1999)
$f_{oc,abiotic}$	fraction organic carbon for abiotic solids	0.01	
$f_{oc,biotic}$	fraction organic carbon for biotic solids	0.4	Bierman and Dolan (1981)
$f_{oc,detritus}$	fraction organic carbon for detritus	0.2	

* Values for seven segments are given in Table A2

Table A2: Summary of Parameters Used in Model Calculations

Segment #	VUPPB (m/day)	VUPPW (m/day)	VSSLONG (m/day)
1	0.100×10^{-4}	0.200×10^{-4}	0.300×10^{-5}
2	0.100×10^{-4}	0.200×10^{-4}	0.300×10^{-5}
3	0.100×10^{-4}	0.100×10^{-4}	0.100×10^{-4}
4	0.100×10^{-4}	0.200×10^{-4}	0.300×10^{-5}
5	0.100×10^{-4}	0.200×10^{-4}	0.300×10^{-5}
6	0.400×10^{-5}	0.500×10^{-5}	0.300×10^{-5}
7	0.400×10^{-5}	0.500×10^{-5}	0.300×10^{-5}